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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/966,541	09/27/2001	Joseph C. Klein	021579.0204	4640

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EXAMINER

DUNCAN, MARC M

ART UNIT

PAPER NUMBER

2113

DATE MAILED: 06/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 09/966,541	Applicant(s) KLEIN ET AL.	
	Examiner Marc M Duncan	Art Unit 2113	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 27 September 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17, 19-31, 33 and 37 is/are rejected.
- 7) ☒ Claim(s) 18, 32 and 34-36 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Status of the Claims***

Claims 1-17, 19-31, 33 and 37 are rejected under 35 U.S.C. 103(a).

Claims 18, 32, 34, 35 and 36 are objected to.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 2, 3, 4, 5, 6, 7, 8, 9, 17, 21, 30, 33 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mullarkey et al. in view of Merriam Webster.

Regarding claim 1:

Mullarkey teaches a host computer having one or more test recipes in col. 3 lines 12-15. The test recipe is equivalent to the algorithm of Mullarkey.

Mullarkey teaches a test site distributed distal from the host computer, each test site adapted to interface with a memory device under test, each test site having an

embedded processor in col. 3 lines 12-15 and Fig. 1. The tester is remote from the host in the cited column and lines. The figure shows the test site interfacing with a memory device under test, as we as an embedded processor in the form of the controller.

Mullarkey teaches a communication line interfaced with the host computer and the test site, the network communicating the test recipe from the host computer to the embedded processor for execution of the test recipe by the test site in col. 3 lines 12-15.

Mullarkey does not explicitly teach the communication line being part of a network. Mullarkey does not explicitly teach plural test sites. Mullarkey does, however, teach the tester connected to a host by a communication line.

Merriam Webster teaches that a network is a system of computers terminals and databases connected by communications lines (see definition).

It would have been obvious to one of ordinary skill in the art at the time of invention to combine the definition of network with the Mullarkey teaching of a communications line.

One of ordinary skill in the art at the time of invention would have been motivated to combine the teachings because Mullarkey teaches a communication line that connects the tester to a remote site to receive the testing algorithm. A network, by definition, is the use of a communications line to connect multiple computers or devices across a distance.

Regarding claim 2:

Mullarkey teaches wherein the memory device under test comprises a flash memory device in col. 3 lines 16-24.

Regarding claim 3:

Mullarkey teaches wherein the memory device under test comprises a fast page DRAM in col. 3 lines 16-24. A fast page DRAM is a type of DRAM.

Regarding claim 4:

Mullarkey teaches wherein the memory device under test comprises an EDO DRAM in col. 3 lines 16-24. An EDO DRAM is a type of DRAM.

Regarding claim 5:

Mullarkey teaches wherein the memory device under test comprises a SDRAM in col. 3 lines 16-24.

Regarding claim 6:

Mullarkey teaches wherein the memory device under test comprises a DDR in col. 3 lines 16-24.

Regarding claim 7:

Mullarkey teaches wherein the memory device under test comprises a rambus in col. 3 lines 16-24.

Regarding claim 8:

Mullarkey teaches wherein the memory device under test comprises a SRAM in col. 3 lines 16-24.

Regarding claim 9:

Mullarkey teaches wherein the memory device under test comprises an EEPROM in col. 3 lines 16-24. EEPROM is a type of flash memory.

Regarding claim 17:

Mullarkey teaches wherein the test recipe comprises instructions for performing algorithmic testing at the test site in col. 3 lines 12-15. Mullarkey teaches an algorithm.

Regarding claim 21:

The claim is rejected as the method of using the system of claim 1.

Regarding claim 30:

Mullarkey teaches reading the test recipe with a processor at the test site in col. 3 lines 12-15.

Mullarkey teaches associating the recipe with instructions stored at the test site in col. 2 lines 41-43.

Mullarkey teaches executing the associated instructions to generate test data for storage on the memory device in col. 1 line 65-col. 2 line 5.

Mullarkey teaches reading the data from the memory device in col. 1 line 65-col. 2 line 5.

Mullarkey teaches comparing the read data with a predetermined result to determine whether the memory device accurately stores data in col. 1 line 65-col. 2 line 5.

Regarding claim 33:

Mullarkey teaches wherein the instructions generate the test data algorithmically in col. 3 lines 12-15. Mullarkey teaches an algorithm.

Regarding claim 37:

Mullarkey teaches an adapter for physical interfacing with the memory device under test in Fig. 1.

Mullarkey teaches a test engine interfaced with the adapter to send test data to the memory device according to test instructions and to read stored data from the memory device for comparison with predetermined results in Fig. 1 and col. 1 line 65-col. 2 line 5.

Mullarkey teaches a processor interfaced with the test engine and adapted to interface with a network, the processor operable to receive a test recipe from the network and to translate the test recipe into test instructions for execution by the test engine in Fig. 1 and col. 3 lines 12-15.

Claims 10, 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mullarkey and Merriam Webster as applied to claim 1 above.

Regarding claim 10:

The teachings of Mullarkey and Merriam Webster are outlined above.

Mullarkey and Merriam Webster do not explicitly teach the network being Ethernet. Mullarkey and Merriam Webster do, however, teach a network.

The examiner takes official notice that Ethernet is a type of network.

It would have been obvious to one of ordinary skill in the art at the time of invention to combine the Ethernet with the network teaching of Mullarkey and Merriam Webster.

One of ordinary skill in the art at the time of invention would have been motivated to combine the teachings because Ethernet is a widely used local area network type that is defined by the IEEE 802.3 standard. Ethernet allows for high speed data transfer for 10 or 100 Mbps transmissions.



Regarding claim 13:

The teachings of Mullarkey and Merriam Webster are outlined above.

Mullarkey and Merriam Webster do not explicitly teach the network being a local area network. Mullarkey and Merriam Webster do, however, teach a network.

The examiner takes official notice that a local area network is a type of network.

It would have been obvious to one of ordinary skill in the art at the time of invention to combine a local area network with the network teaching of Mullarkey and Merriam Webster.

One of ordinary skill in the art at the time of invention would have been motivated to combine the teachings because a local area network allows devices to communicate data to each other, which meets the needs of Mullarkey and Merriam Webster to transmit data over a communications line.

Regarding claim 14:

The teachings of Mullarkey and Merriam Webster are outlined above.

Mullarkey and Merriam Webster do not explicitly teach the network being the Internet. Mullarkey and Merriam Webster do, however, teach a network.

The examiner takes official notice that the Internet is a type of network.

It would have been obvious to one of ordinary skill in the art at the time of invention to combine the Internet with the network teaching of Mullarkey and Merriam Webster.

One of ordinary skill in the art at the time of invention would have been motivated to combine the teachings because the Internet allows devices to communicate data to

each other, which meets the needs of Mullarkey and Merriam Webster to transmit data over a communications line.

Claims 11, 12, 15, 22 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mullarkey and Merriam Webster (MW) as applied to claims 10, 14, 21 and 30 above, and further in view of W3C.

Regarding claim 11:

The teachings of Mullarkey and MW are outlined above.

Mullarkey and MW do not explicitly teach wherein the test recipe comprises XML formatted data. Mullarkey and MW do, however, teach sending the data over the Internet.

W3C teaches sending XML formatted data in sections 1 and 1.1.

It would have been obvious to one of ordinary skill in the art at the time of invention to combine the teaching of using the XML format with the teaching of sending data over the Internet.

One of ordinary skill in the art at the time of invention would have been motivated to combine the teachings because the use of XML is designed for ease of implementation and is designed to be flexible to the needs of each programmer.

Regarding claim 12:

The combination of Mullarkey, MW and W3C teaches wherein each embedded processor accepts the XML formatted recipe data to generate instructions for testing the memory device under test in Mullarkey col. 3 lines 12-15 and the W3C specification.

Regarding claim 15:

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The teachings of Mullarkey and MW are outlined above. Mullarkey and MW further teach the use of TCP/IP. The Internet inherently uses TCP/IP.

Mullarkey and MW do not explicitly teach wherein the test recipe comprises XML formatted data. Mullarkey and MW do, however, teach sending the data over the Internet.

W3C teaches sending XML formatted data in sections 1 and 1.1.

It would have been obvious to one of ordinary skill in the art at the time of invention to combine the teaching of using the XML format with the teaching of sending data over the Internet.

One of ordinary skill in the art at the time of invention would have been motivated to combine the teachings because the use of XML is designed for ease of implementation and is designed to be flexible to the needs of each programmer.

Regarding claim 22:

The teachings of Mullarkey and MW are outlined above.

Mullarkey and MW do not explicitly teach wherein the test recipe comprises XML formatted data. Mullarkey and MW do, however, teach sending the data over the Internet.

W3C teaches sending XML formatted data in sections 1 and 1.1.

It would have been obvious to one of ordinary skill in the art at the time of invention to combine the teaching of using the XML format with the teaching of sending data over the Internet.

One of ordinary skill in the art at the time of invention would have been motivated to combine the teachings because the use of XML is designed for ease of implementation and is designed to be flexible to the needs of each programmer.

Regarding claim 31:

The teachings of Mullarkey and MW are outlined above.

Mullarkey and MW do not explicitly teach the use of XML formatted data.

Mullarkey and MW do, however, teach sending the data over a network.

W3C teaches sending XML formatted data in sections 1 and 1.1.

It would have been obvious to one of ordinary skill in the art at the time of invention to combine the teaching of using the XML format with the teaching of sending data over a network.

One of ordinary skill in the art at the time of invention would have been motivated to combine the teachings because the use of XML is designed for ease of implementation and is designed to be flexible to the needs of each programmer.

Regarding claim 16:

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mullarkey and MW as applied to claim 14 above, and further in view of W3C and Microsoft.

The teachings of Mullarkey and MW are outlined above.

Mullarkey and MW do not explicitly teach wherein the test recipe comprises XML formatted data. Mullarkey and MW do, however, teach sending the data over the Internet.

W3C teaches sending XML formatted data in sections 1 and 1.1.

It would have been obvious to one of ordinary skill in the art at the time of invention to combine the teaching of using the XML format with the teaching of sending data over the Internet.

One of ordinary skill in the art at the time of invention would have been motivated to combine the teachings because the use of XML is designed for ease of implementation and is designed to be flexible to the needs of each programmer.

The combination of Mullarkey, MW and W3C does not explicitly teach the use of NFS. Mullarkey, MW and W3C do, however, teach the use of a network to transfer data.

Microsoft teaches using NFS to transfer data (see definition).

It would have been obvious to one of ordinary skill in the art at the time of invention to combine the use of NFS with the sending of data over a network.

One of ordinary skill in the art at the time of invention would have been motivated to combine the teachings because the use of NFS allows Unix and Windows NT users to access remote files as they were local.

Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mullarkey and MW as applied to claim 1 above, and further in view of Brehm et al.

Regarding claim 19:

The teachings of Mullarkey and MW are outlined above.

Mullarkey and MW do not explicitly teach plural host computers interfaced with the network, each host computer having one or more test recipes; wherein each host

computer controls tests performed by at least one test site. Mullarkey and MW do, however, teach a test site connected to a host computer via a network, which is a system of connected computers.

Brehm teaches plural host computers interfaced with the network, each host computer having one or more test recipes; wherein each host computer controls tests performed by at least one test site in Fig. 8.

It would have been obvious to one of ordinary skill in the art at the time of invention to combine the use of plural host computers with the remote testing system of Mullarkey and MW.

One of ordinary skill in the art at the time of invention would have been motivated to combine the teachings because Mullarkey and MW teach a network, a system of connected computers, and Brehm teaches that a system as disclosed by Brehm provides an effective and practical method for reducing overall test cost without sacrificing quality.

Regarding claim 20:

Brehm teaches a test designer interfaced with the network, the test designer operational to create the test recipes and communicate the test recipes to the host computers in Fig. 8. Three of the host computers are disclosed as program development computers, the programs in this combination being the test recipes that are sent to the testing sites after their development.

Claims 23-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mullarkey, MW and W3C as applied to claim 22 above.

Regarding claim 23:

The teachings of Mullarkey, MW and W3C are outlined above.

Mullarkey, MW and W3C do not explicitly teach the network being Ethernet.

Mullarkey, MW and W3C do, however, teach a network.

The examiner takes official notice that Ethernet is a type of network.

It would have been obvious to one of ordinary skill in the art at the time of invention to combine the Ethernet with the network teaching of Mullarkey, MW and W3C.

One of ordinary skill in the art at the time of invention would have been motivated to combine the teachings because Ethernet is a widely used local area network type that is defined by the IEEE 802.3 standard. Ethernet allows for high speed data transfer for 10 or 100 Mbps transmissions.

Regarding claim 24:

The teachings of Mullarkey, MW and W3C are outlined above.

Mullarkey, MW and W3C do not explicitly teach the network being a local area network. Mullarkey, MW and W3C do, however, teach a network.

The examiner takes official notice that a local area network is a type of network.

It would have been obvious to one of ordinary skill in the art at the time of invention to combine a local area network with the network teaching of Mullarkey, MW and W3C.

One of ordinary skill in the art at the time of invention would have been motivated to combine the teachings because a local area network allows devices to communicate

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data to each other, which meets the needs of Mullarkey, MW and W3C to transmit data over a communications line.

Regarding claim 25:

The teachings of Mullarkey, MW and W3C are outlined above.

Mullarkey, MW and W3C do not explicitly teach the network being the internet.

Mullarkey, MW and W3C do, however, teach a network.

The examiner takes official notice that the Internet is a type of network.

It would have been obvious to one of ordinary skill in the art at the time of invention to combine the Internet with the network teaching of Mullarkey, MW and W3C.

One of ordinary skill in the art at the time of invention would have been motivated to combine the teachings because the Internet allows devices to communicate data to each other, which meets the needs of Mullarkey, MW and W3C to transmit data over a communications line.

Regarding claim 26:

The teachings of Mullarkey, MW and W3C are outlined above.

Mullarkey, MW and W3C do not explicitly teach the network being a wide area network. Mullarkey, MW and W3C do, however, teach a network.

The examiner takes official notice that a wide area network is a type of network.

It would have been obvious to one of ordinary skill in the art at the time of invention to combine a wide area network with the network teaching of Mullarkey, MW and W3C.



One of ordinary skill in the art at the time of invention would have been motivated to combine the teachings because a wide area network allows devices to communicate data to each other, which meets the needs of Mullarkey, MW and W3C to transmit data over a communications line.

Regarding claim 27:

The teachings of Mullarkey, MW and W3C are outlined above.

Mullarkey, MW and W3C do not explicitly teach wherein sending the XML formatted data further comprises sending the data using TCP/IP. Mullarkey, MW and W3C do, however, teach the use of a network.

The examiner takes official notice that TCP/IP is a network protocol.

It would have been obvious to one of ordinary skill in the art at the time of invention to combine TCP/IP with the network teaching of Mullarkey, MW and W3C.

One of ordinary skill in the art at the time of invention would have been motivated to combine the teachings because TCP/IP was, and is, the de facto standard for data transmission over networks.

Claims 28 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mullarkey, MW and W3C as applied to claims 22 and 27 above, and further in view of Microsoft.

Regarding claim 28:

The teachings of Mullarkey, MW and W3C are outlined above.

The combination of Mullarkey, MW and W3C does not explicitly teach the use of NFS. Mullarkey, MW and W3C do, however, teach the use of a network to transfer data.

Microsoft teaches using NFS to transfer data (see definition).

It would have been obvious to one of ordinary skill in the art at the time of invention to combine the use of NFS with the sending of data over a network.

One of ordinary skill in the art at the time of invention would have been motivated to combine the teachings because the use of NFS allows Unix and Windows NT users to access remote files as they were local.

Regarding claim 29:

The teachings of Mullarkey, MW and W3C are outlined above.

The combination of Mullarkey, MW and W3C does not explicitly teach the use of FTP. Mullarkey, MW and W3C do, however, teach the use of a network to transfer data.

Microsoft teaches using FTP to transfer data (see definition).

It would have been obvious to one of ordinary skill in the art at the time of invention to combine the use of FTP with the sending of data over a network.

One of ordinary skill in the art at the time of invention would have been motivated to combine the teachings because FTP is the protocol used for copying files to and from remote computer systems on a network using TCP/IP.

***Allowable Subject Matter***

Claims 18, 32, 34, 35 and 36 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: Prior art was not found that explicitly teaches or fairly suggests wherein the test recipe comprises instructions for performing vector testing at the test site as outlined in claims 18 and 34. Prior art was not found that explicitly teaches or fairly suggests wherein the executing step comprises executing the instructions with a sequencer at the test site as outlined in claim 34.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art not relied upon contains elements of the instant claims and/or represents a current state of the art.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc M Duncan whose telephone number is 703-305-4622. The examiner can normally be reached on M-T and TH-F 6:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Beausoliel can be reached on 703-305-9713. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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md

  
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